

CLAIMS

1. A stent for surgical implantation into a patient, said stent including a wire which is expandable from a relatively straightened state for introduction into the patient, to an
5 occluding state wherein the wire defines an occluding anchor part in which the wire has adopted a series of turns extending over the cross-sectional area of the occluding anchor part.

2. A stent as claimed in claim 1, wherein the wire is formed of a shape memory effect material and is self-expanding into its occluding state above a predetermined trigger
10 temperature.

3. A stent as claimed in claim 1, wherein the wire is formed of a superelastic material which is resiliently biased towards its occluding state and which can be retained in its relatively
15 straightened state.

4. A stent as claimed in claim 1, 2 or 3 wherein the wire, in its occluding state, also defines another anchor part which is spaced from the occluding anchor part and joined thereto by a linking part.

20 5. A stent as claimed in claim 4, wherein said another anchor part is of wire having a series of turns extending laterally relative to the linking part.

6. A stent as claimed in claim 5, wherein the wire turns extend over the cross-sectional area of said another anchor part.

7. A stent as claimed in claim 5 or 6, wherein the wire turns of said another anchor part are not aligned with the wire turns of said occluding anchor part in the direction of separation of the anchor parts.

5 8. A stent as claimed in anyone of claims 5 to 7, wherein the wire turns in said another anchor part are of substantially conical form, of scroll or spiral form, of cycloidal form or of spiro-cycloidal form.

10 9. A stent as claimed in any preceding claim, wherein the wire turn in said occluding anchor part are of substantially conical form, of scroll or spiral form, of cycloidal form or of spiro-cycloidal form.

10. A stent as claimed in any preceding claim, wherein at least part of the wire is coated with a pharmacological coating.

15 11. A stent as claimed in claim 10, wherein the coating is of a protein that initiates blood clotting and cell adhesion.

20 12. A stent as claimed in any preceding claim, wherein at least part of the wire has a roughened surface.

13. A delivery system for placement of a stent, said system comprising a catheter containing or adapted to contain a stent as claimed in anyone of claims 1 to 12 in its relatively straightened state, an elongate flexible placement member extending or being adapted to
25 extend longitudinally of said catheter and having proximal and distal ends, and releasable

connection means connecting or being adapted to connect the distal end of the placement member with the stent.

14. A releasable Connector for releasably interconnecting first and second parts, said

5 Connector comprising first and second Connector regions adapted to be secured to the first and second parts, respectively, wherein the first Connector region has a shape memory effect and is changeable from a first state to a second state above a predetermined trigger temperature, said first state being one in which the first connector region is adapted to hold the first part and the second state being one in which the first Connector region is adapted to
10 release the first part so as to enable the first and second parts to be disconnected.

15. A releasable connector as claimed in claim 14, wherein the first connector region comprises a first bush part which is adapted, in its first state, to receive and hold the first part.

15 16. A releasable connector as claimed in claim 14 or 15, wherein the second connector region comprises a second bush part which is adapted to receive and hold the second part when the first connector region is in both of its first and second states.

17. A combination of a releasable connector as claimed in claim 14, 15 or 16 and said first
20 and second parts, wherein the first part is a body implant and the second part is a member for delivering the body implant to the required body region.

18. A combination as claimed in claim 17, wherein the body implant is a stent.

25 19. A combination as claimed in claim 18, wherein the stent is as claimed in anyone of

claims 1 to 12.

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20. A method of producing a shaped article, comprising the steps of (a) winding a length of shape memory material onto a mandrel to form a series of turns defining a coil region
5 having a longitudinal extent; (b) treating the material wound onto the mandrel so as to set therein a memory of the shape of the coil region; (c) removing the wound material from the mandrel; (d) treating the removed material so as to recover the memorised shape of the coil region; (e) changing the length of the coil region; and (f) treating the material so as to set therein a memory of the changed shape of the coil region.

10 21. A method as claimed in claim 20, wherein step (e) is effected by reducing the length of the coil region.

15 22. A method as claimed in claim 20, wherein the coil region is reduced in length so that it is substantially planar.

23. A method as claimed in claim 20, 21 or 22, wherein between steps (d) and (f), one or more of the turns defining the coil region are displaced laterally of the direction of